



*Many Voices Working for the Community*

# **Oak Ridge Site Specific Advisory Board**

## **Environmental Management & Stewardship Committee**

**Wednesday, May 26, 2021, 6 p.m.  
Virtually via Zoom**

### **FINAL AGENDA**

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- 6:00 Convene/introductions (A. Jones)
- 6:05 Continued discussion on EMDF/Waste Disposal Capacity; *Issue Group: Lohmann, McCurdy, Perez, Shields, Shoemaker, Swindler, and Tapp.*
- If possible, please submit questions ahead of the meeting to staff at [orssab@orem.doe.gov](mailto:orssab@orem.doe.gov).**
- 6:25 Public comment
- 6:30 Action Items Review  
*None*
- 6:35 Announcements (A. Jones)  
Next committee meeting: June 23 – Topic: Continued discussion on Groundwater Remedies
- 6:40 Adjourn



# Ongoing Efforts to Assure Waste Disposal Capacity for the Oak Ridge Reservation

Brian Henry, Y-12 Portfolio Federal Project Director  
Oak Ridge Office of Environmental Management

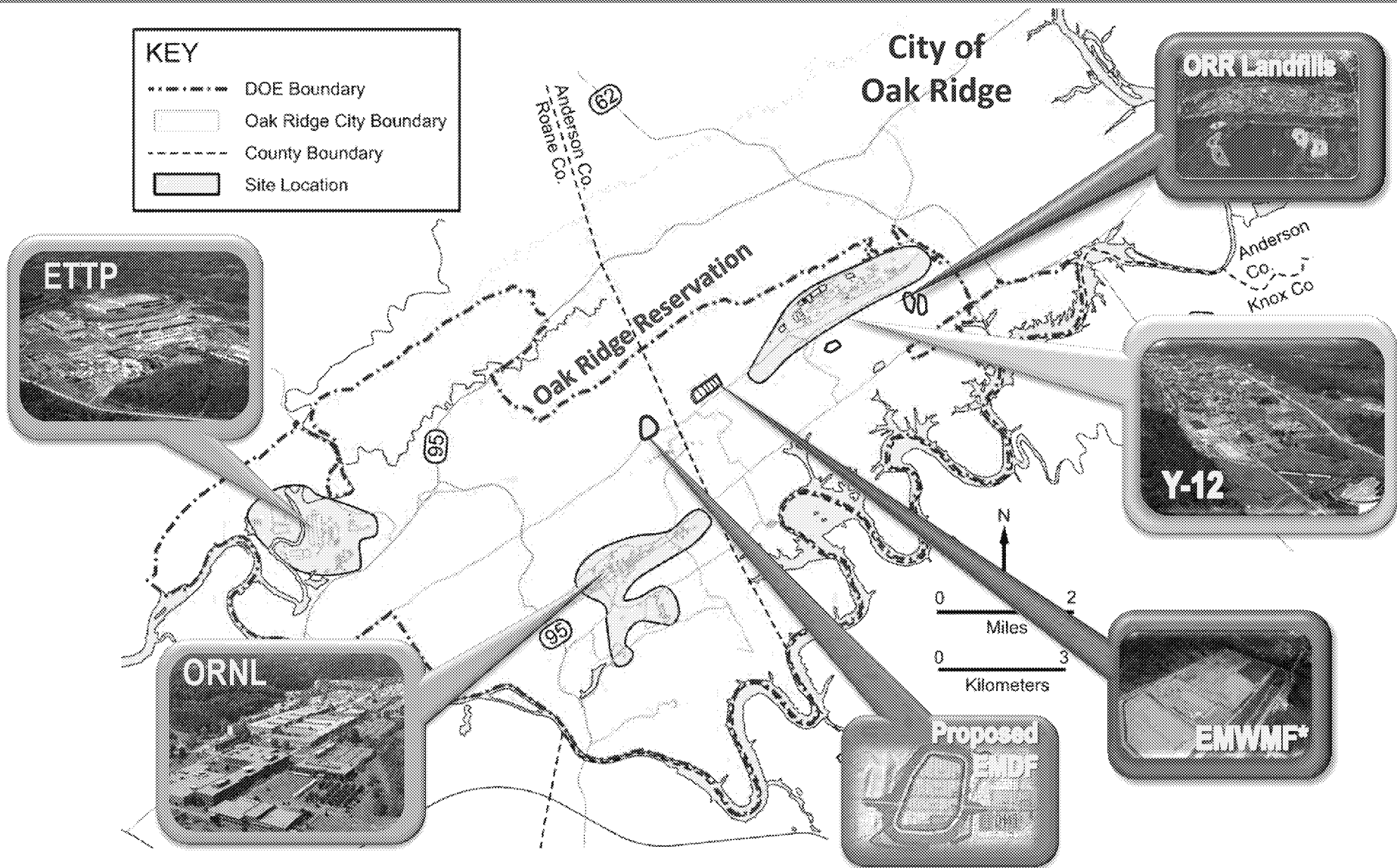
May 12, 2021

# Current and planned disposal capacity is sufficient to meet needs



- DOE operates several engineered landfills for safe and compliant disposal of ORR remediation, demolition, and sanitary waste
- Operating landfills are permitted by Tennessee Division of Solid Waste Management
- Environmental Management Waste Management Facility (EMWMF) and planned Environmental Management Disposal Facility (EMDF) fall under the regulatory requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Each landfill/waste disposal facility has established waste acceptance criteria to determine whether waste is acceptable for disposal

# Oak Ridge includes three distinct sites with different missions



\* Environmental Management Waste Management Facility

# On-site disposal availability is key to the successful cleanup of ETTP



ETTP Before Cleanup



ETTP After Cleanup

# Considerable cleanup scope remains at ORNL and Y-12 requiring additional waste disposal capacity



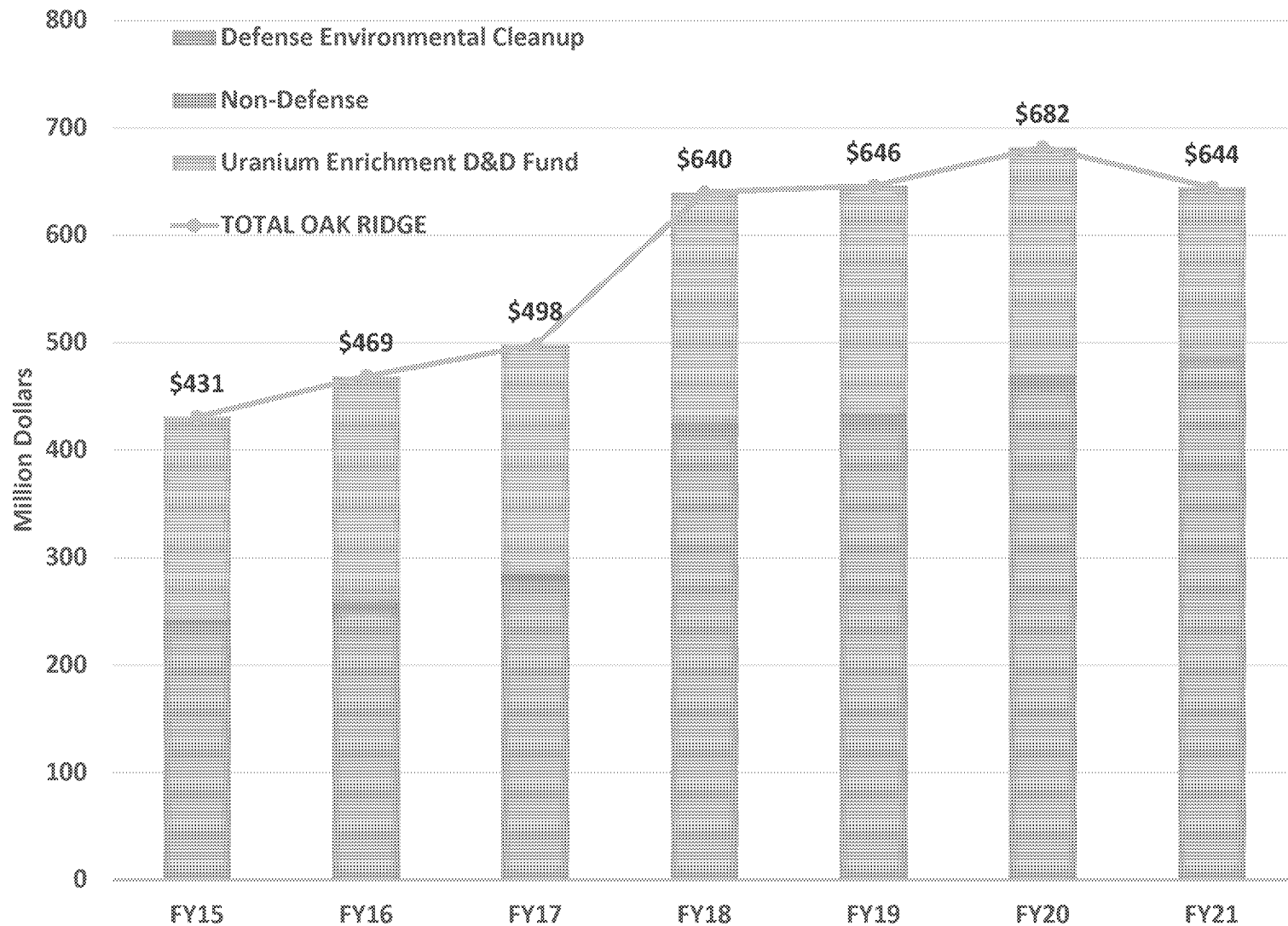
Excess Facilities at Y-12



Excess Facilities at ORNL

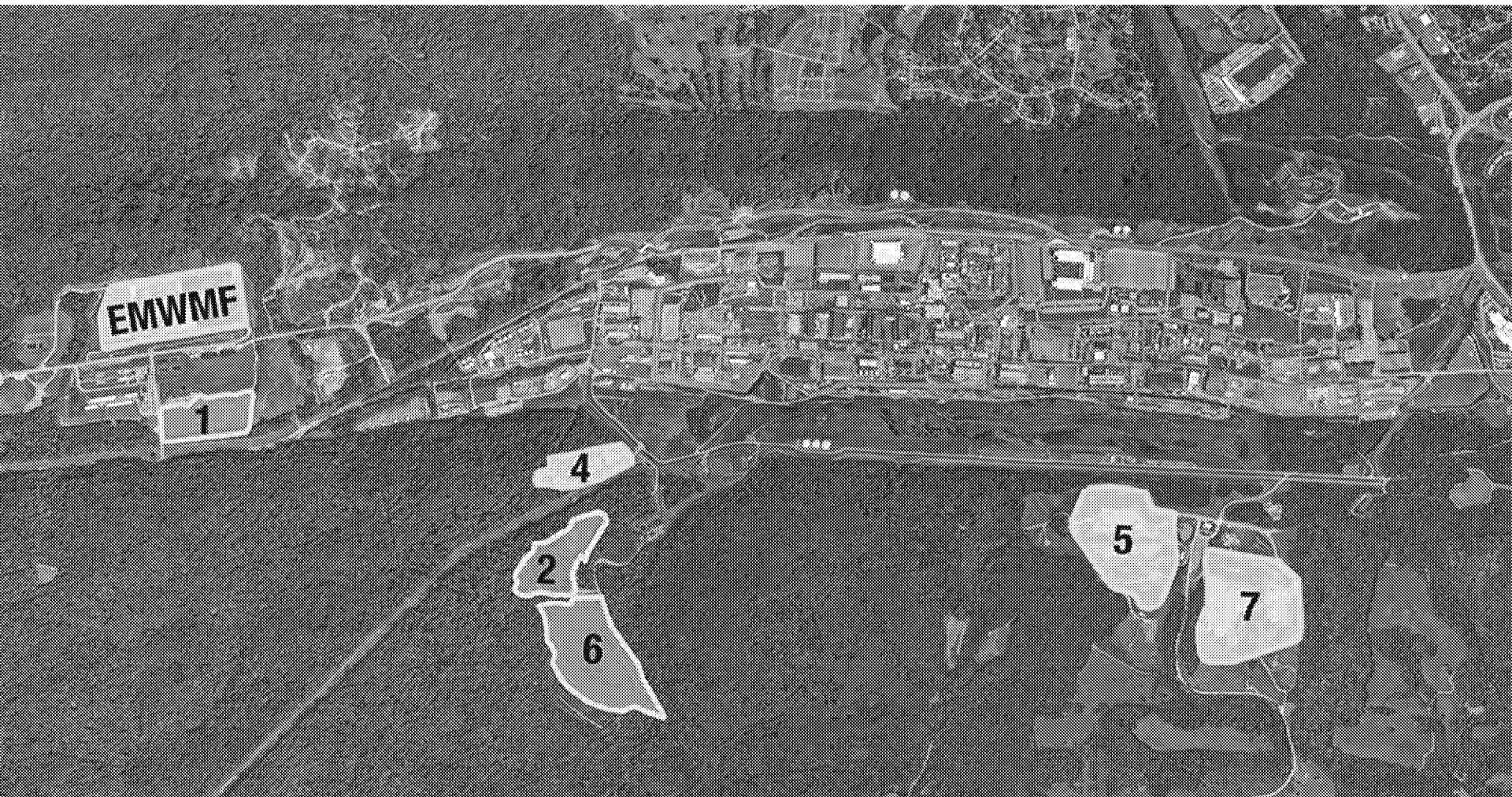
- Over 300 buildings to be demolished at Y-12 and ORNL
- Oak Ridge contains 66 of DOE's 254 high-risk facilities
- Wide range of physical, chemical, and nuclear hazards that present risk to critical ongoing research and national security missions

# OREM Budget





# Landfills/EMWMF are located within DOE- controlled areas



- Operational Facilities
- Closed Facilities

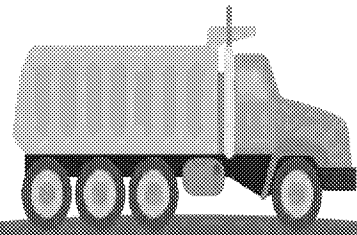


# Management of various wastes from cleanup operations across DOE Complex requires multiple pathways



**Effective cleanup programs require Onsite and Offsite disposal options**

Waste Management Program Hierarchy



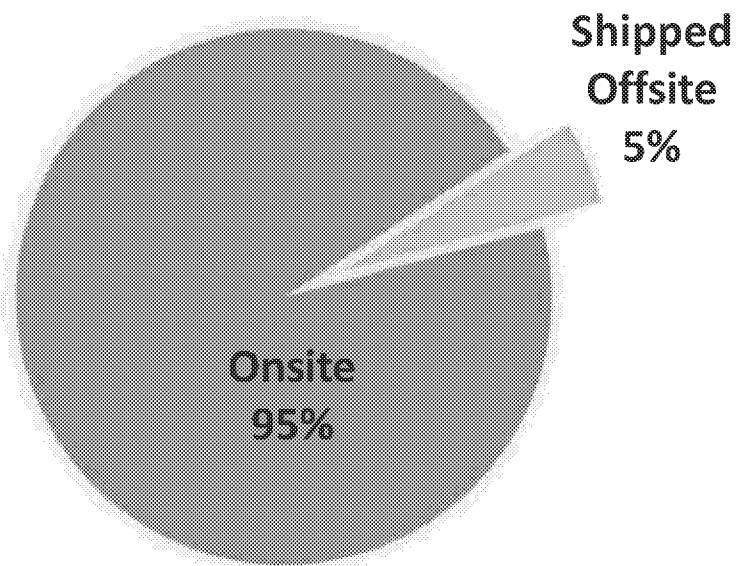
1. Recycle/reuse

2. Disposal at onsite sanitary landfills

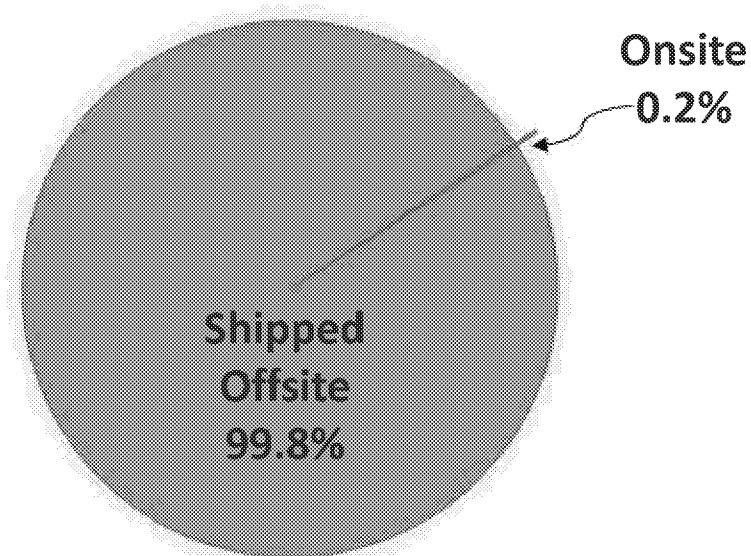
3. Disposal at onsite CERCLA facility

4. Disposal at offsite facilities

# Offsite disposal is necessary for higher activity waste

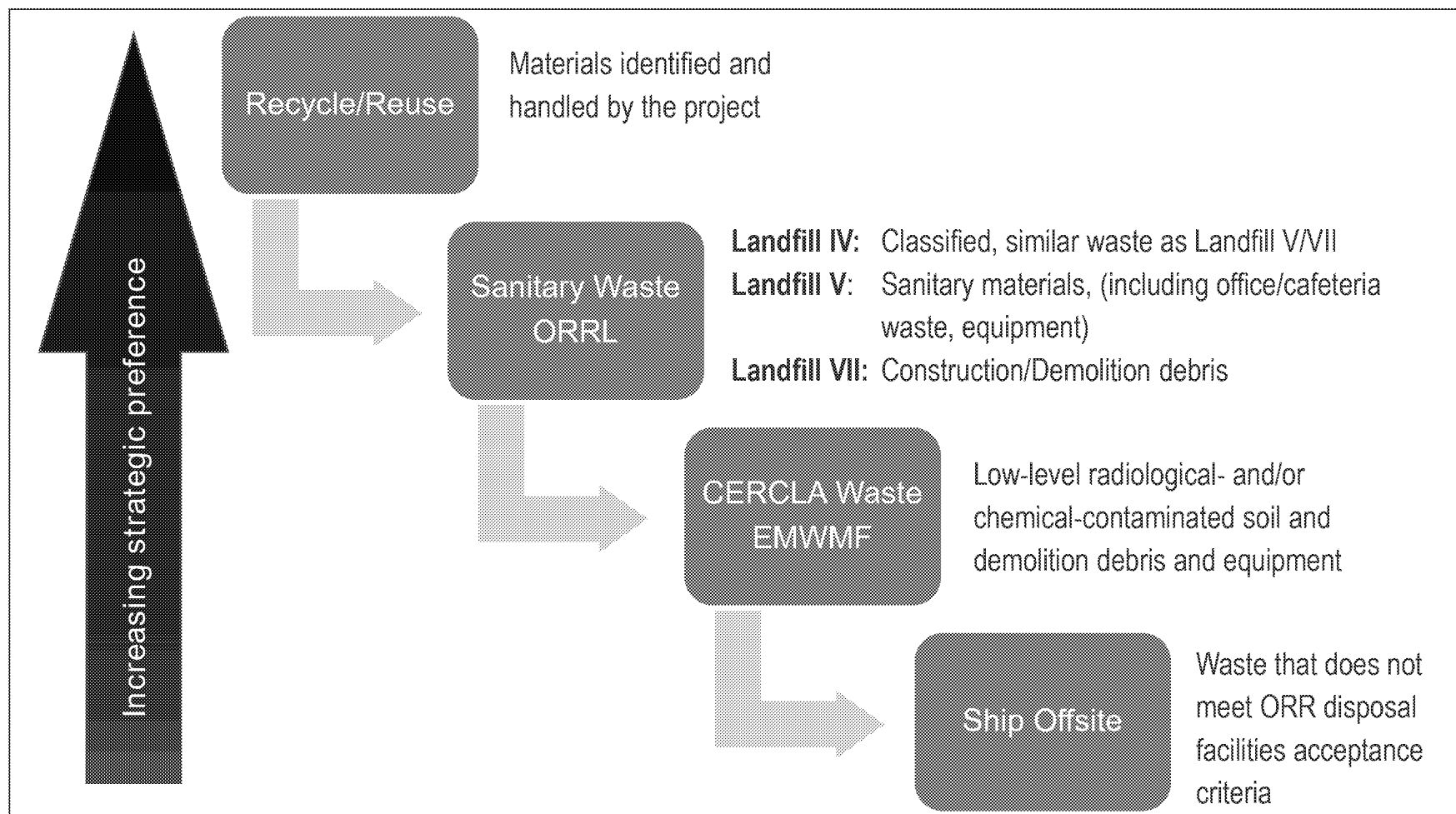


**By Volume**



**By Radiological Activity**

# Waste disposal decisions follow waste hierarchy



# Remaining capacity supports completion of East Tennessee Technology Park cleanup



- 28-acre disposal facility, opened in 2002
- Lined disposal cells receive low-level radiological and chemical waste from CERCLA cleanup of ORR and associated sites
- Approximate total capacity 2.3 million cubic yards
  - Final cap redesign increased capacity to approximately 2.3 million cubic yards
  - Currently about 80% full
  - Projected to be full in late-2020s



# Future capacity is needed for Y-12 and ORNL CERCLA cleanup



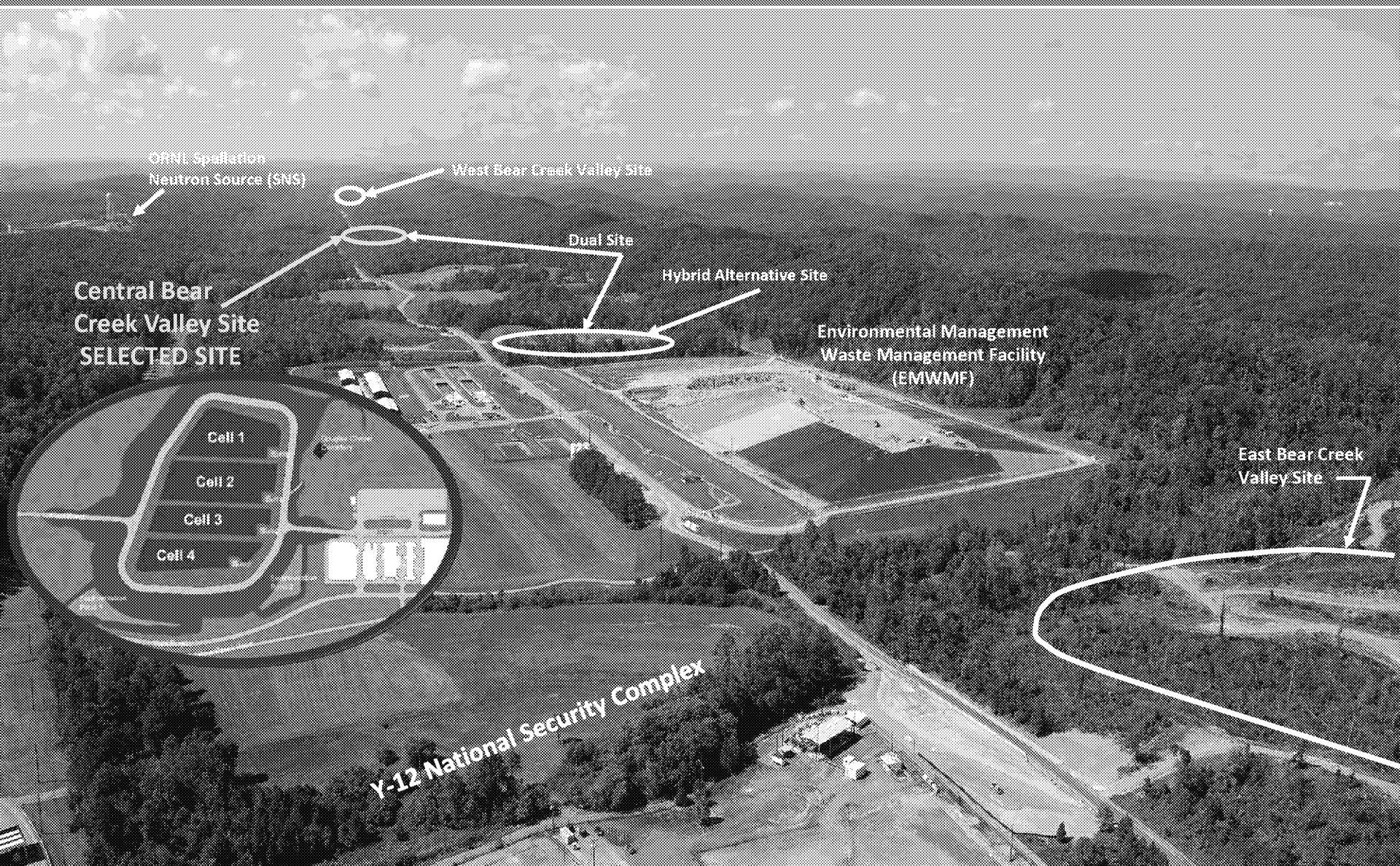
## Permitted Oak Ridge Reservation landfills

- Constructed in phases to reach build out of permitted capacity
- Additional area will be constructed to support future cleanup

## EMDF (Low-level CERCLA Cleanup Waste)

- Preferred site is located at Central Bear Creek Valley
- Projected disposal capacity is 2.2 M yd<sup>3</sup>
- D1 Record of Decision to be issued to regulators for review by early July 2021
- Operational overlap of two years with EMWMF is ideal

# Central Bear Creek Valley Site is the proposed Environmental Management Disposal Facility location



# DOE presented the Proposed Plan to the public in Fall 2018



- Multiple meetings with community leaders began in 2015
- Sessions with public following submittal of the Proposed Plan – September 13, October 2, and October 11, 2018
- Public meeting following the Proposed Plan submittal – November 7, 2018
- Public comment period – September 7, 2018 to January 9, 2019
- State and public main concerns:
  - Groundwater and site characterization
  - Waste acceptance criteria
  - Mercury





# Proposed Plan listed the State's main concerns that are in the process of being resolved



TDEC\* identified seven issues to be resolved for an approved ROD

- ✓ Site characterization (incorporating a field demonstration)
- ✓ DOE assessments (PA/CA in the Administrative Record)
- ✓ No underdrains beneath waste footprint
- Applicable or Relevant and Appropriate Regulations
- Waste acceptance criteria
- Mercury treatment and disposal
- Radiological discharge limits (recent 12/31/20 ruling by the EPA Administrator has been partially incorporated in D1 ROD)

\*Tennessee Department of Environment and Conservation

# Moving forward along three major paths



## DOE Order 435.1

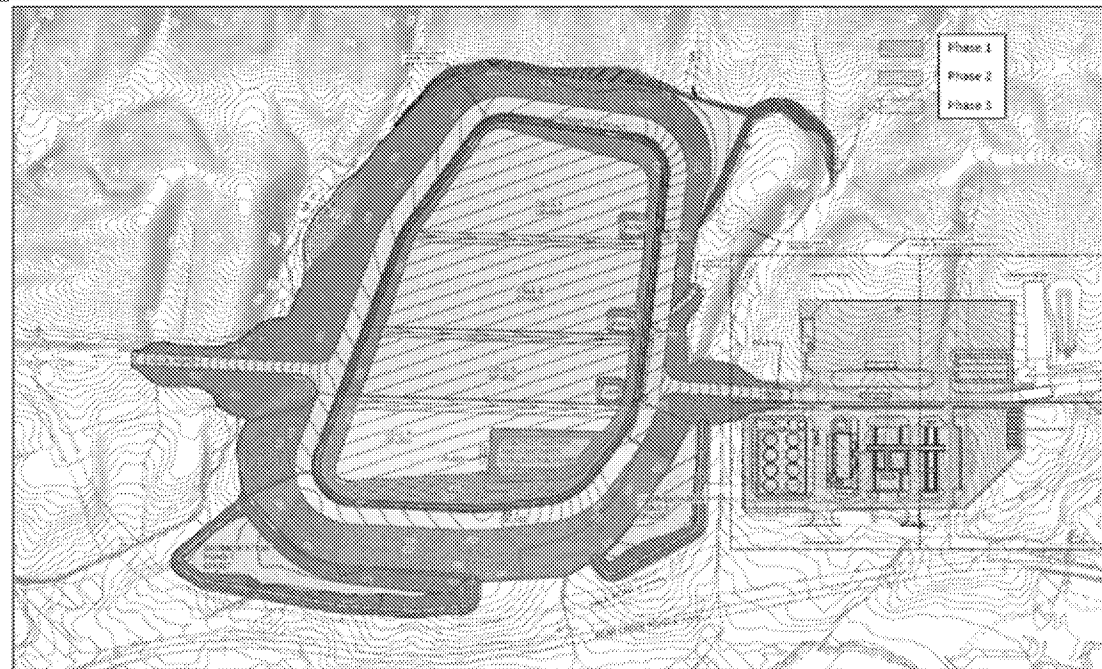
- Received a Preliminary Disposal Authorization Statement (DAS)
- Develop remaining documents for eventual Operational DAS

## CERCLA Process

- Submit EMDF D1 ROD before July 2021 milestone for FFA review
- Work with FFA Parties to resolve issues and approve ROD
- Develop CERCLA documents for design and operations

## DOE Order 413.3B

- Develop Final Design
- Complete DOE Order 413.3B documentation and approvals to support construction



# QUESTIONS?